**TECHNOLOGICAL INSTITUTE OF THE PHILIPPINES**

**QUEZON CITY**

**COLLEGE OF INFORMATION TECHNOLOGY EDUCATION (CITE)**

**ITE001 – Computer Programming 1**

**NAME: Buenaventura, Aristotle**

**PROGRAM/SECTION: IS11S1**

**ASSESSMENT TASK: Iterative or Repetition Control Structure using switch and for loop**

*The following question support the attainment of Course Intended Learning Outcomes (CILO):*Design computing based solution using control structures, functions, array and other statements

INSTRUCTION: Write a program that will let the user to enter a number and display the output based on CHOICES below.

**SOURCE CODE:**

#include<iostream>

using namespace std;

main(){

int num;

int ctr;

int trans;

int sum = 0;

int product = 1;

string name;

string section;

cout << "Enter your name: ";

cin >> name; // Users will input their name

cout << "Enter your section: ";

cin >> section; // Users will input their section

cout << "\n \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"; // Information box

cout << "\n \* Name: " << name << " \*";

cout << "\n \* Section:" << section << " \*";

cout << "\n \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

cout << "\nEnter a number: ";

cin >> num; // Users will input a number

cout << "\n Transaction";

cout << "\n 1.Display ascending order from 1 to " << num << " using for loop"; // Ascending

cout << "\n 2.Display descending order from " << num << " to 1 using for loop"; // Descending

cout << "\n 3.Display all numbers divisible by 3 from 1 to " << num << " using for loop"; // Divisible by 3

cout << "\n 4.Display all numbers divisible by 8 from 1 to " << num << " using for loop"; // Divisible by 8

cout << "\n 5.Display the sum of 1 to " << num <<" using for loop"; // Sum

cout << "\n 6.Display the product of 1 to " << num <<" using for loop"; // Product

do{ // do while loop

cout << "\n\n Enter transaction: ";

cin >> trans; // Users will choose transactions from 1 to 6

switch (trans) { // Switch statement

case 1: // Ascending

for (ctr = 1; ctr <= num; ctr++) {

cout << ctr <<" ";

}

break;

case 2: // Descending

for (ctr = num; ctr >= 1; ctr--) {

cout << ctr <<" ";

}

break;

case 3: // Divisible by 3

for (ctr = 1; ctr <= num; ctr++) {

if (ctr % 3 == 0) {

cout << ctr << " ";

}

}

break;

case 4: // Divisible by 8

for (ctr = 1; ctr <= num; ctr++) {

if (ctr % 8 == 0) {

cout << ctr << " ";

}

}

break;

case 5: // Sum

for (ctr = 1; ctr <= num; ctr++) {

sum += ctr;

}

cout<< "The sum is "<<sum;

break;

case 6: // Product

for (ctr = 1; ctr <= num; ctr++) {

product \*= ctr;

}

cout<< "The product is "<<product;

break;

default: // Invalid Input

cout<< "Invalid";

break;

} //end of switch

} while (trans<=6); // end of do while

} //end of main

OUTPUT ( SCREEN SHOT all output from case 1 to 6)

